THE POLITICAL ECONOMIST AND THE PUBLIC.

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THE development of economic thought has been affected at intervals by more or less formal consideration of the relative extent of its subject-matter and the proper scope of its inquiry. Originally conceived as the art of domestic government, Political Economy became at the hands of the Physiocrats and their immediate precursors a systematic study of the phenomena of wealth. Two influences, emanating from the philosopher-scientists of the early eighteenth century, and together summed up in the historic ambiguity of the term "natural," contributed to this end. First, the existence of economic uniformities was asserted; and, second, the possibility of basic rules of economic conduct was assumed. Similarly, Adam Smith, starting from an academic discussion of "Police," in logical development of the teachings of Pufendorf and Hutcheson, passed with growing sense of the importance of the subject, and under the personal stimulus of the *Economistes,* to a full consideration of national well-being. Professor Sidgwick has pointed out how this transition from Political Economy, as a branch of the art of government, to Political Economy, as an analysis of wealth phenomena, is actually crystallized in the "Wealth of Nations." Explicitly defining the purpose of economic study as the first, Adam Smith in fact devoted the bulk of his treatise to an analysis of public welfare.

The drift of Political Economy away from rules of economic administration to an analysis of wealth phenomena was aided by the intellectual reaction that followed the excesses of the French Revolution. Economic doctrines, and pre-eminently the doctrines of the new economic liberalism, were identified throughout Europe with French principles and the revolutionary spirit. In

1793, three years after Adam Smith's death, Dugald Stewart still hesitated to give, even before a select audience, any detailed account of the "Wealth of Nations." And Mr. John Rae cites Lord Cockburn's testimony to the fact that, when Stewart first began to give a course of lectures in the University of Edinburgh on political economy in the winter of 1801-2, the mere term "political economy" made people start. "They thought," he says, "it included questions touching the constitution of governments, and not a few hoped to catch Stewart in dangerous propositions."

But the determining force in the transition of Political Economy from a body of precepts to a body of principles was the circumstance that, with the dawn of the nineteenth century, the analysis of wealth phenomena ceased to be exclusively the concern of pamphleteers and special pleaders, and became the subject of deliberate and systematic study by a widening circle of keen and influential minds. The "Wealth of Nations" required too much thought and reflection to be popular, lamented David Hume within a month after its appearance, and the readers of the day, fresh from the pages of the "Decline and Fall," might well have found the Scotch philosopher turgid and prolix. But by 1800 the work had reached a tenth edition; its influence upon political thought was evident; its impress upon political action was in part realized, in part foreshadowed; Dugald Stewart's lectures at Edinburgh were crowded, and young men like Francis Horner, Samuel Romilly, Sydney Smith, George Grote, James Mill, David Ricardo and Thomas Robert Malthus were turning from natural science, from legal studies and from literary activity to earnest pursuit of the subject whose prosecution involved keen intellectual pleasure and whose results stood in intimate relation with urgent practical affairs.

It is doubtful whether economic study has ever been pursued with the same intentness and enthusiasm as in England during the period, roughly speaking, of the Napoleonic War. The reflection is seen in Mrs. Marcet, in Maria Edgeworth and in Harriet Martineau. "It has now become high fashion with blue ladies to talk political economy, and make a great jabbering on the subject," wrote Maria Edgeworth in 1822. And again: "Fine ladies require that their daughters' governesses should teach political economy. 'Do you teach political economy?' 'No, but I can learn

it.' 'Oh dear, no; if you don't teach it, you won't do for me.' "

Indeed, contemporary evidence abounds. For example, Francis Horner—that brilliant young scholar-publicist whose too early death surely meant grave loss to the progress of economic truth —had read the "Wealth of Nations" before he was seventeen, had followed Dugald Stewart's lectures in Edinburgh thereafter, and was devotedly engaged in economic study while practising at the bar in the Scotch capital.

He describes in his journal, under date of April 30th, 1801, his systematic manner of approach: "In the afternoon Lord Webb and I made our second attack upon Smith's 'Wealth of Nations'; and finished, for the present, the subject of division of labor. Our mode of reading is, first to go through each chapter with a minute attention to the accuracy of the argument, endeavoring at the same time to recollect all the illustrations by which we can either confirm, contradict, or modify his general principles; when we have read as many chapters as make a complete subject of itself, we review the whole in a more general manner, and take a note of such subjects of future investigation as seem necessary to complete the theory." From the detailed study of Adam Smith, young Horner passed to the writings of the *Economistes,* finding comfort in Lauderdale's remark that he (Lauderdale) "had repeatedly left the study of the '*Tableau Economique,*' cursing himself for a blockhead." When Smith's perplexing fifth chapter on value and price proved a maze, he sought the clue in the currency tracts of Rice Vaughan, Harris, Bodin, Lowndes and Locke.

It is to this fact of earnest and enthusiastic study, rather than to any formal principle of schematization or methodology, that we must ascribe the Ricardians' easy use of the term "the science of Political Economy." When Ricardo writes to Hutches Trower: "I am very sorry to be obliged to agree with you that there are a very few who are perfect masters of the science of Political Economy," or when he states that it is in the domain of taxation that "the most perfect knowledge of the science is required," the concept of science which he has in mind is a body of principles relating to the production and distribution of wealth, obtained by systematic observation of actual phenomena on the part of a group of capable minds, and made useful by affording governments the possibility of wise economic policies.

Sixty years after the "Wealth of Nations" was published, at the very close of the first half of the century and a quarter that go to make up the modern history of economic study, virtual unanimity had been reached as to the changed purpose of economic inquiry. Rules of governmental conduct had passed from primary to secondary endeavor, and, conceived as a science, Political Economy had become the study of the phenomena of wealth, having for its object the formulation of a body of abstract principles, which should be capable in their application of shaping public policy in economic affairs.

In 1837, Senior formulated the distinction by differentiating *theoretical political economy,* which "explains the nature, production, and distribution of wealth," from *practical political economy,* which "ascertains what institutions are most favorable to wealth." John Stuart Mill and Cairnes took practically the same view, and with them, and after them, the majority of English writers of the earlier school.

The tranquil acquiescence into which economic thought had thus fallen in the late thirties, with respect to accepted *dicta* of the province and subject-matter of the science, was rudely shaken in the course of the next generation by three distinct influences, about which centre the sustained and often acrimonious discussions of the proper scope and method of economic science, that constitute a distinguishing feature of the second half of the modern history of economic thought.

From France came the message of the unity of social phenomena and the concept of a master science of sociology. From Germany came protest against the doctrines of economic universalism and perpetualism, and insistence upon the principle of historical relativity. From England came the gospel of economic development and the evolution of industrial organization. Comte, Roscher and Spencer—with their prototypes Hegel, Savigny and Darwin—represent the great forces that, in succession, first shook the structure of economic science to its very base, and then inspired its extension and fortification.

We are still too near the scene of conflict to require any review of its events. As so often in the history of science and, preeminently, in the history of economic science, that which had come to overthrow remained to influence and to be influenced. The principles of industrial evolution, of economic relativity and

of social interdependence entered into the very heart and essence of economic study, and left their mark in a changed and bettered condition. If the din of doctrinal battle no longer resounds, it is not because of abandonment or surrender, but because a sane and honorable *modus* has been arranged.

In but one corner of the field does the struggle yet continue. A handful of doughty spirits are still bravely hammering one another, in theoretical determination of the precise bounds of economic science. Yesterday, it was as to the interrelation of Economics and Ethics; the day before, of Economics and Mathematics or Statistics; to-day, it is the respective provinces of Economics and Sociology, on the one hand, and of Economics and History, on the other.

To this sustained dialectic I shall venture no further contribution. Whatever advantages, in the nature of precision of thought and economy of effort, attend the solemn partition of an undiscovered country must long since have been attained. Further debate suggests the waste of scholastic controversy, barren in result and mischievous in the suspension of positive investigation, in the blunting of mental acumen and in the diminution of public respect.

A far more promising service than the text-book demarcation of the kingdoms of knowledge seems to lie in a comparative survey of what, in default of a more exact phrase, might be termed the "pace" of economic science. Political Economy has for a hundred years or more been a going concern, the subject of sustained and deliberate study. It seems high time to pause and inquire as to the relative efficiency of its devotees. In what relation does the achievement of the economist stand to that of his fellow scientists? According as he has forged ahead or fallen behind, the economist must teach to, or he must learn from, those who are speeding to the same goal, although by other courses.

If recourse be had to the readiest empirical measure—public estimate—we are left in no manner of doubt that the progress of Political Economy, as tested by the practicability of its application, has been incomparably slower in degree and less in result than that of coordinate sciences. For example, at the present moment there are three great economic problems disturbing the consciousness of the American people: Trusts, Tariffs and Trades-Unions. It should be as natural and proper for the pub-

lic mind to turn to the scientific economist for specific and definite guidance with regard thereto as for the farmers of the arid regions to harken to the physicist as to the efficacy of concussion as a means of rain-making, or for a municipal administration to turn to a pathologist for counsel as to the best method of dealing with epidemic smallpox. Each of the three economic problems can be simplified, if not solved, by the determination of an underlying principle. The public will know how to deal with industrial combinations, when an answer has been given to the query: "Is there an assignable limit to the size of the modern industrial unit, and, if so, what determines it?" The tariff question will speedily enter upon a new era, if clear light be thrown upon the precise relation of labor cost and industrial efficiency. The *crux* of trade-unionism is the determination of a natural law of wages, and, no less important, a practicable method of ascertaining it. In each of these directions, the economist might properly be expected to meet, indeed to anticipate, the public appeal for counsel, and in each of these directions the economist, within the ken of the ordinary man of affairs, has been mute.

Unless, therefore, the economist is to acquiesce with a resigned fatalism in a condition of affairs—of which my illustrations are, I believe, fairly typical—it is imperative that there be profounder searching of heart and more accurate scrutiny of fact, for explanation of the loss of popular respect for economic study and of the decline, at best partially arrested in our own day, of the economist's influence in public affairs.

A generation ago, Arnold Toynbee asserted that "the wage-fund theory was the great cause of the unpopularity of Political Economy among working-men." More recently, President Hadley, after deliberate inquiry, explained the smaller practical influence of the economist in government and administration as due, first, to the transition of Political Economy from an art to a science, with a corresponding loss of clearness and precision in its propositions; second, to the use of precedent rather than scientific analysis by the courts as the basis of the adjudication of modern economic problems; third, to the neglect of collective interests and to the checks upon administrative power in the organization of modern representative government.

But, whatever truth resides in these analyses—and there is

much—fundamentally and in the last instance, the distinctly, nay, the distinctively unfavorable attitude of the public mind towards economic theory can only be due to one or more of four causes:

First, the public mind may be inherently opposed to accept scientific leadership in the formation of its economic opinions, in something of the same sense that the late Mr. Spencer noted that men who would instantly disclaim judgment in problems of the natural science would, without correspondingly greater equipment, give out-of-hand verdict upon complex questions of social policy. Or, second, it may be that economic phenomena, in their complexity, variety and inaccessibility, defy, beyond a certain point, that productive systematic inquiry which we term successful scientific study. Or, third, the tribe of economists may be intellectually inferior to their fellow scientists, or, at least, less well equipped in those particular mental requisites which go to make up the successful scientist. Or, finally, the methods and the apparatus employed by the political economist may be relatively inefficient.

If Political Economy as a subject of scientific study has any right to be, we must of necessity reject the first three of these hypotheses and concentrate our attention upon the fourth. Such a procedure is, moreover, encouraged by the complexion of existing facts. It requires the barest observation to realize a startling contrast in method between Political Economy and any of the actively pursued natural sciences. Let us turn for a moment to Chemistry, where within recent years the bounds of organized knowledge have been extended with the most brilliant results. In so far as the layman may speak, it appears that modern chemical —or, for that matter, physical or biological—study involves three consecutive stages: (1) inquiry and research, (2) experiment, (3) theorization. Associated with these essential activities are the complementary processes of initial conjecture affording a tentative working plan; formation of trial hypotheses in result of investigation and for submission to experiment; and conversion, by demonstration, of theory into law. But, in the main, chemical science advances from truth to truth, from probability to certainty, because a body of mature workers, equipped with intimate knowledge of the achieved, are busy marshalling and classifying facts, searching for and formulating uniformities, testing hypotheses and demonstrating laws.

If we return now to the domain of economic science and to the

scene of economic study, the contrast is fairly startling. We find a body of capable and devoted workers, and a definite and inviting subject-matter. But here, to any appreciable degree, the parallelism stops. There is no collecting and classifying related data, in their qualitative aspects, no tentative selection of economic uniformities, no verification of hypotheses by reference and experiment. As against the chemical investigator in his laboratory, deliberately and systematically gathering a particular group of facts, and formally submitting the sequences which they suggest to comparison and test, with a reasonably well-established hypothesis as the ultimate endeavor, we have a corps of student apprentices busy upon historical and institutional monographs; a group of younger scientists absorbed in academic duties, and a body of sages engrossed in doctrinal discussion. A single category has rarely been used to include two things less identical than the term "scientific" in reference to chemical and economic study, respectively. If the one be, the other is not. It is a difference in kind, not in degree, of which the contrasted terms "deductive" and "inductive," "experimental" and "*a priori*," suggest the consequence, not the cause. Some further interpretation of this remarkable distinction is demanded.

A score of years have elapsed since the coincidence, roughly speaking, of economic investigators and economic issues effected a renaissance of economic study in the United States—synchronized by the organization of the American Economic Association in 1885. Within that period, every important university of the country has found it necessary to provide more or less abundant opportunities for economic instruction, increasing numbers of capable students have gathered for training in economic investigation, and economic science in the United States has come to be studied with a vigor and an activity unequalled in any European country, and unsurpassed in the case of any of the natural sciences in this. But the method of investigation has been narrow. On the one hand, we have permitted the Comptian influence and the "extreme Historismus" of the German school to justify economic microscopics; and, on the other hand, dismayed by the vast area, the extensive activities, and the scattered data subject to economic inquiry, and poorly equipped both in requisite resources and opportunities, we have refrained from attempting comprehensive induction.

In consequence, economic investigation in the United States, although pursued with unexampled activity, has been almost exclusively historical or institutional, on the one hand, and local or intensive, on the other. Of extensive economic investigation, economic induction in the proper sense of the term, little has been attempted and less achieved. The historical evolution of economic institutions as revealed in more or less accessible records, the functional activity of economic organizations as displayed in limited areas—these have defined the scientific activity of the ordinary economist. Of the comprehensive study of the history, structure and functions of any actual part of the economic organism, we have had infrequent example.

In the field of local finance, for example, we have had, on the one hand, faithful historical studies of the finances of particular States and cities and of particular fiscal institutions, and, on the other hand, we have been given intelligent analyses of the present financial status of specific localities. But the investigator has probably not yet attempted—understand, I do not say *completed*—an exhaustive study of local finance in the United States, in the spirit in which we may conceive the chemist or the physicist approaching a corresponding problem. Similarly, the institutional history of the negro in certain States has been traced, and his present status in certain limited localities has been described. But the larger subject, the negro in the United States, taken in its scientific entirety, is still untouched.

Turn where we will, a similar condition prevails. Railroad transportation, trade-unionism, taxation, industrial combinations, tariffs—as fields of investigation—have been approached only fragmentarily, historically or locally. Brought face to face with extensive subject-matter, economists have shown the white feather, and solaced their souls in the thought that comprehensive study of any important economic institution might properly be postponed until such number of detailed monographs, dealing with specific aspects of the subject, have been completed as will permit full exposition and safe generalization.

Monographs have multiplied; doctoral dissertations have accumulated, and the progress of economic science, as judged by results, has been imperceptible. The experience of twenty years seems to suggest that the prime usefulness of intensive economic studies is educational and local, and that variety of approach, dis-

tinctness of treatment, change of environment are grave qualifications under existing conditions, of the value, and certainly of the economy, of large reliance upon this monographic method of economic investigation.

The proposition which I venture to submit is that the time has now arrived when, without any necessary cessation of historical and local studies, the economic investigator—and, in particular, the economic investigator in the United States,—if he is to attain his highest scientific possibility, must adopt a larger mode of inquiry, a mode analogous to that employed by the physical scientist, and described as extensive or experimental rather than intensive or institutional. He must derive his subject-matter not from past history alone, nor from the present experience of restricted localities; but he must observe and collate the phenomena under consideration from an area practically co-extensive with their manifestation; he must interpret each group of facts in the light of the conditions prevailing in that particular place; and he must test the uniformities revealed by reference, as tentative hypotheses, to conditions in still other localities.

If he is attempting safe and useful generalizations, he must consider, for example, the taxation of corporations not by one State, but by every State. He must study the structure and functions of trades-unions, not with respect to a handful of labor organizations and a few convenient cities, but in the light of the policy and practice, declared and actual, of every important national labor-union, as displayed in many representative localities. In a word, the basis of economic induction must henceforth be, to a much greater degree than heretofore, qualitative data, amassed as deliberately and laboriously as chemical or physical data are collected by the natural scientist in his laboratory, and approximating in comprehensiveness the quantitative material the public statistician makes available with increasing efficiency.

The successful conduct of economic investigation along the extensive or experimental course thus outlined involves the use of a group of workers, instead of the individual student, as the unit of research. Until such time as the number of independent investigators will have greatly multiplied, the well-equipped department of Political Economy in the University will, naturally, be the prime agent of scientific activity. Such an economic laboratory or seminary will include not only a directing and teaching staff

and a body of students actually in residence, but affiliated workers in the field and associated beneficiaries of subventions desirous of operating from an academic base. A particular body of contemporary economic phenomena will be selected for collective, rather than cooperative, investigation; and specific aspects thereof will be assigned to individual workers for research in accordance with an organic plan. A student showing special interest in or capacity for investigation along lines other than that selected for collective effort, will be encouraged to follow his particular bent; otherwise, his energies will be directed, by deliberate assignment, to the seminary topic. Class instruction and the use of bibliographical and documentary materials will serve as the preparation for systematic laboratory and field work.

In regard to books and documents, the investigator must be able to command, in addition to ordinary library apparatus, all primary documentary material relevant to his inquiry, whether it be as ephemeral as municipal reports and trade-union journals, or as unobtainable by formal request as trade agreements and corporation records. Similarly, he must be able to publish the results of his investigations in the precise form which scientific fidelity or practical usefulness demands, without regard to their commercial attractiveness or to the limited resources of existing scientific agencies. A more liberal policy of library administration and a more intelligent appreciation of the proper relation of publication to investigation in the social sciences, have improved conditions in the past few years, as to these two requisites.

It is with respect to field and experimental work that the occasion for largest change exists. Extensive investigation, as distinct from historical study and local inquiry, must bear the same relation to Political Economy that field-work does to Geology and the clinic does to Medicine. The immediate environment will first be utilized as an economic laboratory for the development of scientific spirit in economic study and sound method in economic research, and as the field from which bases of working hypotheses may be derived. Thereafter, the investigator will extend the range of his inquiry by visits to, and even residence in, representative localities, with a view to collecting wider and more varied data and to testing tentative conclusions.

Such a procedure involves two essentials: leisure and resources. The investigator's time and energy, if not entirely available for

scientific inquiry, must certainly not be unduly absorbed by the routine engagements of the student or the teacher. To the extent that he is still a student or instructor in academic attendance, opportunity for extensive inquiry must come with greater prominence of field-work and laboratory exercise in economic instruction. Economic teaching can properly harken to the message of the physical sciences, that the ideal of student training is less the accumulation of detail than the development of a mode of thought. An association, of course; a reduction of lecture attendance; a unification of seminaries; and, most important of all, the utilization of the long summer recess for field-work—will ordinarily effect an economy of time which will make possible that amount of experimental inquiry demanded both by student development and scientific progress.

With respect to resources, the investigator must be in command of funds sufficient to enable him to visit and, upon certain occasions, temporarily to reside in representative localities for the purpose of gathering additional evidence and of testing and verifying tentative conclusions. To some extent, such funds can be made available by a modification of the fellowship system, the original purpose of which, the attraction of students to postgraduate study, has ceased to be necessary, and the further extension of which along existing lines threatens serious evils. Beyond this, aid may be anticipated from cooperation with governmental agencies and with endowed institutions of research. But, most of all, university authorities must recognize that "investigation funds" are as essential to scientific activity in Political Economy as laboratory apparatus is to Chemistry and clinical provision to Medicine. It seems reasonably safe to venture the opinion that less and less will lack of material resources operate as a handicap, and that, as long as the method be sound and truth light the way, economic investigation will probably receive as generous an equipment as the economic investigator desires.

In short, I urge a closer parallelism in method of investigation between Political Economy and Physical Science. Comparative study can fairly well replace deliberate experiment. Beyond this, we need but a larger equipment and a common spirit. Heretofore, the economist has adapted his method to his resources. Let him now demand resources, made necessary by this method.

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